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## **CLAIMS**

- A method of diagnosing CRC or a predisposition to developing CRC in a subject, comprising determining a level of expression of C10orf3 in a patient derived biological sample, wherein an increase of said level compared to a normal control level of said gene indicates that said subject suffers from or is at risk of developing CRC.
- 2. The method of claim 1, wherein said increase is at least 10% greater than said normal control level.
- 3. The method of claim 1, wherein the expression level is determined by any one method selected from group consisting of:
  - (a) detecting the mRNA of C10orf3,
  - (b) detecting the protein encoded by C10orf3, and
  - (c) detecting the biological activity of the protein encoded by C10orf3,
- 4. The method of claim 1, wherein said level of expression is determined by detecting hybridization of C10orf3 probe to a gene transcript of said patient-derived biological sample.
- 5. The method of claim 4, wherein said hybridization step is carried out on a DNA array.
- 6. The method of claim 1, wherein said biological sample comprises an epithelial cell.
- 7. The method of claim 1, wherein said biological sample comprises CRC cell.
- 8. The method of claim 4, wherein said biological sample comprises an epithelial cell from a CRC.
- 9. A method of screening for a compound for treating or preventing CRC, said method comprising the steps of:
  - a) contacting a test compound with a polypeptide encoded by a nucleic acid of C10orf3;
  - b) detecting the binding activity between the polypeptide and the test compound; and
  - c) selecting a compound that binds to the polypeptide.
- 10. A method of screening for a compound for treating or preventing CRC, said method comprising the steps of:
  - a) contacting a candidate compound with a cell expressing C10orf3, and
  - b) selecting a compound that reduces the expression level of C10orf3.
- 11. The method of claim 10, wherein said cell comprises a colorectal cancer cell.

- A method of screening for a compound for treating or preventing CRC, said method 12. comprising the steps of:
  - a) contacting a test compound with a polypeptide encoded by a nucleic acid of C10orf3;
  - b) detecting the biological activity of the polypeptide of step (a); and
  - c) selecting a compound that suppresses the biological activity of the polypeptide encoded by a nucleic acid of C10orf3 in comparison with the biological activity detected in the absence of the test compound.
- The method of claim 12, wherein the biological activity of the polypeptide is cell 13. proliferative activity.
- The method of claim 12, wherein the biological activity of the polypeptide is ATP-ase 14. activity.
- A method of screening for compound for treating or preventing CRC, said method 15. comprising the steps of:
  - a) contacting a candidate compound with a cell into which a vector comprising the transcriptional regulatory region of C10orf3 and a reporter gene that is expressed under the control of the transcriptional regulatory region has been introduced
  - b) measuring the activity of said reporter gene; and
  - c) selecting a compound that reduces the expression level of said reporter gene, as compared to a control.
- A kit comprising a detection reagent which binds to nucleic acid sequence or polypeptide 16. of C10orf3.
- A method of treating or preventing CRC in a subject comprising administering to said 17. subject an antisense composition, said composition comprising a nucleotide sequence complementary to a coding sequence of C10orf3.
- A method of treating or preventing CRC in a subject comprising administering to said 18. subject a siRNA composition, wherein said composition reduces the expression of a nucleic acid sequence of C10orf3.
- 19. The method of claim 18, wherein the siRNA comprises a sense strand comprising the nucleotide sequence of SEQ ID NO: 21 as the target sequence.
- 20. The method of claim 19, said siRNA has the general formula 5'-[A]-[B]-[A']-3', wherein [A] is a ribonucleotide sequence coresponding to the nucleotide sequence of SEQ ID NO:

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21,

[B] is a ribonucleotide sequence consisting of 3 to 23 nucleotides, and [A'] is a ribonucleotide sequence consisting of the complementary sequence of [A].

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- The method of claim 18, wherein said composition comprises a transfection-enhancing 21. agent.
- A method for treating or preventing CRC in a subject comprising the step of 22. administering to said subject a pharmaceutically effective amount of an antibody or fragment thereof that binds to a protein encoded by nucleic acid of C10orf3.
- A method of treating or preventing CRC in a subject comprising administering to said 23. subject a vaccine comprising a polypeptide encoded by a nucleic acid of C10orf3 or an immunologically active fragment of said polypeptide, or a polynucleotide encoding the polypeptide.
- A method for treating or preventing CRC in a subject, said method comprising the step of 24. administering a compound that is obtained by the method according to any one of claims 9-15.
- A composition for treating or preventing CRC, said composition comprising a 25. pharmaceutically effective amount of an antisense polynucleotide or small interfering RNA against a polynucleotide of C10orf3 as an active ingredient, and a pharmaceutically acceptable carrier.
- The composition of claim 25, wherein the siRNA comprises a sense strand comprising the 26. nucleotide sequence of SEQ ID NO: 21 as the target sequence.
- The composition of claim 26, said siRNA has the general formula 5'-[A]-[B]-[A']-3', 27. wherein [A] is a ribonucleotide sequence coresponding to the nucleotide sequence of SEQ ID NO: 21,
  - [B] is a ribonucleotide sequence consisting of 3 to 23 nucleotides, and [A'] is a ribonucleotide sequence consisting of the complementary sequence of [A].
- 28. A composition for treating or preventing CRC, said composition comprising a pharmaceutically effective amount of an antibody or fragment thereof that binds to a protein encoded by nucleic acid of C10orf3 as an active ingredient, and a pharmaceutically acceptable carrier.

- 29. A composition for treating or preventing CRC, said composition comprising a pharmaceutically effective amount of the compound selected by the method of any one of claims 9-15 as an active ingredient, and a pharmaceutically acceptable carrier.
- 30. A double-stranded molecule comprising a sense strand and an antisense strand, wherein the sense strand comprises a ribonucleotide sequence corresponding to SEQ ID NO: 21, and wherein the antisense strand comprises a ribonucleotide sequence which is complementary to said sense strand, wherein said sense strand and said antisense strand hybridize to each other to form said double-stranded molecule, and wherein said double-stranded molecule, when introduced into a cell expressing the C10orf3 gene, inhibits expression of said gene.
- 31. The double-stranded molecule of claim 30, wherein said sense strand comprises from about 19 to about 25 contiguous nucleotides from SEQ ID No:1.
- 32. The double-stranded molecule of claim 30, wherein said sense strand consists of the ribonucleotide sequence corresponding to SEQ ID NO: 21.
- 33. The double-stranded molecule of claim 30, wherein a single ribonucleotide transcript comprises the sense strand and the antisense strand, said double-stranded molecule further comprising a single-stranded ribonucleotide sequence linking said sense strand and said antisense strand.
- 34. A vector encoding the double-stranded molecule of claim 30.
- 35. The vector of claim 34, wherein the vector encodes a transcript having a secondary structure, wherein the transcript comprises the sense strand and the antisense strand.
- 36. The vector of claim 34, wherein the transcript further comprises a single-stranded ribonucleotide sequence linking said sense strand and said antisense strand.